

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT						
NATURE OF CONVEYANCE:	ASSIGNMENT						
CONVEYING PARTY DATA							
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Nan-Hsin Tseng</td> <td>05/07/2013</td> </tr> <tr> <td>Ramakrishnan Krishnan</td> <td>05/07/2013</td> </tr> </tbody> </table>		Name	Execution Date	Nan-Hsin Tseng	05/07/2013	Ramakrishnan Krishnan	05/07/2013
Name	Execution Date						
Nan-Hsin Tseng	05/07/2013						
Ramakrishnan Krishnan	05/07/2013						
RECEIVING PARTY DATA							
Name:	Taiwan Semiconductor Manufacturing Company, Ltd.						
Street Address:	No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park						
City:	Hsin-Chu						
State/Country:	TAIWAN						
Postal Code:	300-77						
PROPERTY NUMBERS Total: 1							
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13892806</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13892806		
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Application Number:	13892806						
CORRESPONDENCE DATA							
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NAME OF SUBMITTER:	Linda Ingram						
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Date:	05/13/2013						
Total Attachments: 2 source=2505_Assignment#page1.tif source=2505_Assignment#page2.tif							

OP \$40.00 13892806

ASSIGNMENT

WHEREAS, we,

- | | | | |
|-----|-----------------------|----|---|
| (1) | Nan-Hsin Tseng | of | No. 7, Ln. 66, Yong-an Road
Shanhua District
Tainan City 741 Taiwan, R.O.C. |
| (2) | Ramakrishnan Krishnan | of | 7F., No. 70, Ln. 476, Sec. 1, Guang-Fu Road
East District
Hsinchu City 30072 Taiwan, R.O.C. |

have invented certain improvements in

E-BEAM LITHOGRAPHY WITH ALIGNMENT GATING

for which we have executed an application for Letters Patent of the United States of America,

 of even date filed herewith; and
 X filed on May 13, 2013, and assigned application number 13/892,806; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China. is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal,

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Customer No.: 000042717

substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name: Nan-Hsin Tseng

Residence Address: No. 7, Ln. 66, Yong-an Road, Shanhua District
Tainan City 741 Taiwan, R.O.C.

Dated: 7, May, 2013

Nan-Hsin Tseng
Inventor Signature

Inventor Name: Ramakrishnan Krishnan

Residence Address: 7F., No. 70, Ln. 476, Sec. 1, Guang-Fu Road, East District
Hsinchu City 30072 Taiwan, R.O.C.

Dated: 7TH, MAY, 2013

Ramakrishnan Krishnan
Inventor Signature